The US dollar is widely used as the currency for oil trade invoicing in the European Union (EU). This strong role (around 85% of extra-EU oil imports, see the left panel of Chart A) far outweighs the EU’s imports of petroleum products from the United States, which accounted for just 4% of total EU petroleum imports over the period 2010-16 (see the right panel of Chart A). It is hence used as a vehicle currency, i.e. neither the exporters’ currency nor the local currency. To address this imbalance, the European Commission has published a recommendation on the international role of the euro in the field of energy. For the same reason, outside Europe, China launched oil futures contracts denominated in the renminbi on the Shanghai International Energy Exchange in March 2018 and as part of broader plans to raise the renminbi’s global profile.

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31 Commission Recommendation of 5 December 2018 on the international role of the euro in the field of energy. In the gas industry, the euro plays a more important role than in the oil market, as a large number of gas hubs use the euro.
The specific features of oil as a product influence invoicing currency choice. Differentiated goods tend to be invoiced in the exporter’s currency. But more homogeneous goods such as oil are usually priced in a single (or dominant) currency, such as the US dollar.\(^\text{32}\) However, an analysis of post-World War II data suggests that European oil imports were invoiced equally in US dollars and other currencies, notably the pound sterling.\(^\text{33}\) This suggests that even for homogeneous goods such as oil, multiple invoicing currencies can coexist.

Most commodities are also upstream (i.e. used as inputs) in the production process. Often, firms that use commodities as inputs may want to use the same currency for their exports as for their imports. For example, the importance of crude oil, largely invoiced in dollars, as an input to petroleum products may explain why the US dollar also dominates the invoicing of EU imports of petroleum products. Indeed, research suggests that the use of a vehicle currency is more likely for exporters with a higher share of inputs priced in that vehicle currency.\(^\text{34}\)

The limited data available on commodity invoicing currencies confirm a strong role played by the US dollar. Based on survey data, Chart A shows that more than 80% of extra-EU oil imports are invoiced in dollars. Firm-level data for the United Kingdom suggest that almost 90% of mineral fuel imports are

\(^{32}\) This was first discussed in McKinnon, Ronald, *Money in International Exchange*, Oxford University Press, 1979.


invoiced in a vehicle currency. Similarly, data for Japan suggest that about 90% of petroleum, coal
and natural gas imports were invoiced in US dollars in 2015.35

Conducting an empirical evaluation of oil trade currency invoicing for the euro area is difficult as the
above-mentioned data are only available for a few years. Nevertheless, the pass-through of
fluctuations in the exchange rate into oil import prices might provide an indirect approximation of the
role of the US dollar as a vehicle currency for oil import transactions. Recent empirical findings do in
fact show that for international transactions carried out in a vehicle currency such as the US dollar,
exchange rate fluctuations against that vehicle currency have much higher pass-through into
domestic inflation than those affecting transactions priced in the local or producer (i.e. the partner
country) currency.36 A measure of exchange rate pass-through to oil import prices could therefore
give some indication of the use of the US dollar as a vehicle currency. This can be estimated in the
following panel regression37:

\[
\ln(p_{it}^{M,nc}) = c_i + \alpha \ln(p_{it}^{Brent,USD}) + \beta \ln(e_{it}^{USD}) + \epsilon_{it}
\]

where changes in import prices are regressed on changes in oil prices and the exchange rate. The
closer the coefficient estimate \( \beta \) is to one, the higher the pass-through of exchange rate changes
against the US dollar to oil import prices. This, in turn, could be an indication of a higher share of US
dollar invoicing in oil imports than what would be expected through the import share from the United
States. As a caveat, it could be that prices adjust flexibly for reasons other than invoicing currency.
Moreover, Borio (2019) suggests that the US dollar tends to weaken vis-à-vis the euro when
commodity prices rise; as a result, oil price increases in US dollars would not necessarily match those
in euro.38 We apply the exchange rate with its lags in the spirit of the GMM methodology to control for
possible endogeneity resulting from this relationship between the oil price and the US dollar
exchange rate.

The empirical analysis points to the dominance of the US dollar as an invoicing currency for global oil
trade transactions. The results show that pass-through is almost complete, with a coefficient of 0.93
for the full sample (see Table A). As regards advanced economies, the coefficient is almost equal to
1, which could be an indication of almost complete US dollar invoicing of imports. Similar results hold
for the EU and the euro area. These estimates differ from the survey results shown in the left panel of
Chart A above as the latter draw from evidence gained over the period 2010-16 for Belgium,
Germany, France, Italy, Spain and the United Kingdom. The estimates, in contrast, are for the period
1983-2018 and for a larger sample of countries than that covered in the survey, some of which most

industry and commodity level analysis”, RIEI Discussion Paper, No 16-E-031, 2016; Ito, H. and Kawai,


37 This is a variation of the standard pass-through regression proposed in Gopinath, G., Itskhoki, O. and
Rigobon, R., “Currency Choice and Exchange Rate Pass-Through”, American Economic Review,
American Economic Association, Vol. 100(1), 2010, pp. 304-36. Data are annual and cover
144 countries over the period 1983-2018 (we excluded the United States, OPEC and Russia from the
sample as they are not typical oil importers affected by US dollar invoicing). The regression is estimated
via random effects as suggested by the Hausman test. A test for serial correlation suggested that there
was no autocorrelation in the residuals, hence no need to introduce lagged dependent variables in the
model equation. Robustness checks have been performed introducing lags to the dependent variable.
The results remained broadly unchanged.

38 See Borio, C., “Strengthening the international role of the euro: European and international
perspectives”, speech at the public hearing before the European Economic and Social Committee,
Brussels, 4 April 2019.
likely use the US dollar as a vehicle currency to a greater extent (for example Australia or Canada). For emerging market economies, the coefficient is statistically smaller than one. Still, it has to be borne in mind that other factors can influence the pass-through of the US dollar so that the estimation results provide only some tentative indication that the US dollar is indeed a vehicle currency for most oil imports.

**Table A**

Regression results

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Advanced</th>
<th>Emerging</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\Delta \ln(P^{\text{E}})$</td>
<td>0.93***</td>
<td>0.96***</td>
<td>0.91***</td>
</tr>
<tr>
<td>$\Delta \ln(e^{\text{E}})$</td>
<td>0.93***</td>
<td>0.99***</td>
<td>0.91***</td>
</tr>
<tr>
<td>Constant</td>
<td>0.0024*</td>
<td>0.0025**</td>
<td>0.0024</td>
</tr>
<tr>
<td>Observations</td>
<td>4,617</td>
<td>1,142</td>
<td>3,375</td>
</tr>
<tr>
<td># of countries</td>
<td>144</td>
<td>35</td>
<td>109</td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses *** $p<0.01$, ** $p<0.05$, * $p<0.1$. 